Remedial Investigation/Feasibility Study
Falcon Refinery Superfund Site
Ingleside, San Patricio County, Texas
Remedial Action Contract 2 Full Service Contract: EP-W-006-004
Task Order 0088-RICO-06MC

Task Order 0088 sets forth the framework and requirements for the review of the PRP data and collection of additional data to complete the RI/FS. The Potentially Responsible Parties (PRPs) have completed the Phase 1 activities and the goal is to develop the minimum amount of data necessary to support the selection of an approach for the Site's investigation and subsequent remediation, if necessary. EA has been tasked with determining whether the work performed and reports prepared by NORCO and Superior meet the EPA's requirements under CERCLA for an RI/FS under the Project Planning (EPA SOW Subtask 1.1) and Project Initiation and Support (EPA SOW Subtask 1.5) tasks. The review of the documents provided by the potentially responsible parties (PRPs) has been conducted and several concerns with their previous work have been identified. Details of the concerns are as follows:

Media Specific Screening Levels

The Phase 1 Report used the following media specific screening levels:

- EPA Region 6 human health MSSLs and TCEQ Tier 1 PCLs for human health risk screening of soil and ground water. Soil screening levels using dilution/attenuation factor of 10 was used to evaluate soil-to-ground water migration. The soil to air inhalation pathway was not assessed.
    - Currently Regional Screening Levels (RSLs) are used for screening levels. RSLs are in many cases significantly different then the MSSLs.
    - TCEQ TRRP tables have been updated since these analytical results were reviewed.
    - It appears that soil-to-ground water migration was not used for screening of subsurface soil samples. It appears that they used the residential soil MSSLs and TCEQ Tier 1 PCLs instead. When comparing results to the RSL soil leaching to ground water pathway there appears to be numerous subsurface soil concentrations that exceed the soil leaching to ground water pathway.

- TCEQ ecological benchmarks for ecological screening of soil, sediment and surface water.
    - These benchmarks need to be updated to current screening levels.

- Texas and Federal Surface Water Quality Criteria for human health screening.
    - These benchmarks need to be updated to current screening levels.

Data Collection Concerns

Data collection concerns include:

- Hexavalent chromium in soil samples was not assessed in most samples. The EPA RSLs do not have a total chromium screening level, they have trivalent and hexavalent chromium.

- Ground water samples collected from temporary wells were filtered. MCLs are based on

unfiltered samples.

- Composite samples were collected from areas AOC-2 nonuse area and AOC-4 barge area. Contamination was present in both areas; however AOC-2 contamination is limited (based on MSSL comparison). Since samples were composited it makes it difficult to know exactly where contamination is present. Additional judgemental and random samples should be collected in these two areas to define nature and extent of contamination. Similar sampling plan was proposed in the Phase 2 work plan.

- Background samples were collected at only 4 locations for soil samples and 4 locations for sediment samples. Additional samples are needed for a statistical analysis. Background showed aluminum, arsenic and hexavalent chromium above MSSL screening levels. These need to be re-evaluated using RSLs.

- Vertical delineation was not completed. The need to install vertical delineation wells will be determined after reassessing analytical data.

Additional Areas of Concern (AOC)

The Klienfelder RI/FS Work Plan identifies several additional areas of concern (AOCs) that were not addressed in the previous activities. These include:

- 1979 TWDR Inspection Figure – indicates that during the construction of a permitted temporary pond oily ground was uncovered. The previous owner of the property disposed of basic sediment and waste and oily waste in this area. The location is in AOC-1N west of Tanks 6 and 7. The area adjacently west of this area was assessed with soil borings – but it appears that additional borings may be needed within the main waste area.

- 1982 Waste Pile Location Map – indicates that a waste pile was located north of Tank 30 within the bermed area – waste material was removed in 1982 – This area was never assessed during the Phase 1.

- 1986 Spill Map – Oil sludge was spilled within the bermed area of Tanks 13, 30 and small tanks west of Tank 14. The area of the spill west of Tank 13 was not assessed. .

- 1986 Spill Map – 21 drums were found with bullet holes and spilled materials. These were located west of Tank 31. This area was not assessed during the Phase 1

- 1986 Spill Map – Cooling tower sludge was disposed on-site west of Tank 31. Sample was collected by TWC total chromium was 8020 ppm. Hexavalent chromium was not analyzed. This area was not assessed during the Phase 1.

- Cooling Towers located in AOC-1S were never assessed during the Phase 1.